



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,779	07/31/2001	Biao Lu	10.0405	4004
21919	7590	01/12/2006	EXAMINER	
MEREK, BLACKMON & VOORHEES, LLC 673 S. WASHINGTON ST. ALEXANDRIA, VA 22314			HARPER, KEVIN C	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/919,779

Applicant(s)

LU ET AL.

Examiner

Kevin C. Harper

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 19-21 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 19-21 and 23-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

Applicant's arguments filed October 13, 2005 have been fully considered but they are not persuasive.

1. Applicant argued that Sakauchi in view of Fredette does not disclose a routing protocol or signaling protocol for establishing a protection virtual path as recited in claim 1. However, the routing protocol and signaling protocol of Sakauchi is ATM (col. 1, lines 39-46). The paths are established according to ATM (col. 2, line 65 through col. 3, lines 30). In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the specific responsibilities and actions of the routing protocol and the signaling protocol) are not recited in the rejected claim(s), except in claims 25-26. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

2. Applicant argued that Sakauchi in view of Yamashita does not disclose monitoring a working line of a working line and a protection line. However, Sakauchi discloses monitoring a working line (col. 4, lines 34-45) and the combination of Sakauchi and Yamashita makes obvious monitoring a protection line (Yamashita, fig. 6A; fig. 14, col. 9, lines 21-27) and automatically switching to a protection virtual path (col. 10, lines 2-5) for the purpose of providing fault tolerance (Yamashita, col. 1, lines 59-63).

3. Applicant argued that Sakauchi in view of Yamashita does not disclose electronic circuitry for supporting a routing protocol and a signaling protocol. However, in Sakauchi the components of the switch (fig. 1, especially items 12-15) provide inherent electronic circuitry for supporting the ATM protocol.

4. Applicant argued that the combination of Sakauchi in view of Yamashita and Fredette does not provide motivation for the combination. However, in Fredette the motivation for providing a new protection path is to continually provide a fault tolerant network (fig. 6, steps 302 and 306; para. 6, last seven lines).

### ***Drawings***

5. A replacement drawing was received on October 13, 2005. This drawing is acceptable.

### ***Claim Objections***

6. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 7 includes the same limitations amended in claim 5.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakauchi (US 5,239,537) in view of Fredette et al. (US 2004/0156310).

7. Sakauchi discloses a method for protecting a span in a communication network (fig. 2), where the span connects a first node (fig. 1, node 1) to a second node (node 6). The method comprises creating a protection virtual path (V11) connecting the first and second node through at least a third node (nodes 3 and 5; col. 5, lines 5-8) using a routing protocol and a signaling protocol

Art Unit: 2666

(col. 2, lines 8-15; col. 2, lines 58-63; note: inherent signaling to set-up connections), monitoring a failure condition in the span (fig. 1, item 14) and automatically switching to the protection virtual path (col. 5, lines 5-8).

8. However, Sakauchi does not explicitly disclose creating new protection virtual paths after a failure. Fredette discloses creating new backup paths after a fault restoration (fig. 3, steps 306 and 308). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to create new backup paths in the invention of Sakauchi in order to continually provide a fault tolerant network.

Claims 2-3, 5-7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakauchi (US 5,239,537) and Yamashita et al. (US 5,307,353).

9. Regarding claims 2-3, 5-7 and 19, Sakauchi disclose a method for protecting a span in a communication network (fig. 2), where the span connects a first node (fig. 1, node 1) to a second node (node 6). The method comprises creating a protection virtual path (V11) connecting the first and second node through at least a third node (nodes 3 and 5; col. 5, lines 5-8) using a routing protocol and a signaling protocol (col. 2, lines 8-15; col. 2, lines 58-63; note: inherent signaling to set-up connections), monitoring a failure condition in the span (fig. 1, item 14) and automatically switching to the protection virtual path (col. 5, lines 5-8). Further regarding claim 5, the components of the switch (fig. 1, especially items 12-15) provide inherent electronic circuitry for supporting the ATM protocol.

10. However, Sakauchi does not disclose working and protected links. Yamashita discloses working and protected links in a network (fig. 4C). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide a backup link in the invention of

Sakauchi in order to provide link redundancy during a partial point-to-point failure (col. 3, lines 42-46).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakauchi in view of Yamashita et al, as applied to claim 2 above, in further view of Fredette et al. (US 2004/0156310).

11. Sakauchi in view of Yamashita does not explicitly disclose creating new protection virtual paths. Fredette discloses creating new backup paths after a fault restoration (fig. 3, steps 306 and 308). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to create new backup paths in the invention of Sakauchi in view of Yamashita in order to continually provide a fault tolerant network.

Claim 20-21 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakauchi (US 5,239,537) in view of Yamashita et al. (US 5,307,353), as applied to claim 19 above, and in further view of Fredette et al. (US 2004/0156310).

12. Regarding claims 20-21 and 23-26, Sakauchi in view of Yamashita does not explicitly disclose creating new protection virtual paths or a routing protocol for discovery of neighbors and link status and distributing routing topology and optimal route determination. Fredette discloses creating new backup paths after a fault restoration (fig. 3, steps 306 and 308). The routing protocol provides for discovery of neighbors and link status and distributing routing topology and optimal route determination (para. 21, lines 4-6; para. 23, last three lines) and a signaling protocol provides the capability of establishing, tearing down and modifying connections across network nodes (para. 23, all lines; para. 24, lines 4-17). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to create new backup paths and have a routing protocol and signaling protocol as claimed in the invention of Sakauchi in view of Yamashita in order to

Yamashita in order to continually provide a fault tolerant network and to manage network connections within the network (Fredette, para. 24, lines 8-13 and para. 25, lines 1-2), respectively.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 571-272-3174. The centralized fax number for the Patent Office is 571-273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is kevin.harper@uspto.gov.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

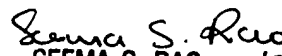
Art Unit: 2666

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see [portal.uspto.gov](http://portal.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin C. Harper

January 8, 2006

  
SEEMA S. RAO 1/9/06  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600